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METHOD FOR THE DIHYDROXYLATION OF OLEFINS USING TRANSITION METAL CATALYSTS

ABSTRACT OF THE DISCLOSURE

This invention relates to process for dihydroxylation of olefins using transition metal catalysts to obtain monofunctional, bifunctional, and/or polyfunctional 1,2-diols of the formula (I)

 $R^1R^2C(OH)-C(OH)R^3R^4$

(1)

where R¹ to R⁴ are defined herein, by reacting an olefin of the formula (II)

R¹R²C=CR³R⁴

(II)

where R¹ to R⁴ are defined as for formula (I),

with molecular oxygen in the presence of an osmium, ruthenium, or manganese compound in water or a water-containing solvent mixture at a pH of from 7.5 to 13.